

FullJuly 2017

Hydrogen permeability of diamondlike amorphous carbons

Motonori Tamura, and Tai Kumagai

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **35**, 04D101 (2017); <http://doi.org/10.1116/1.4977106>

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Unoccupied surface state induced by ozone and ammonia on H-terminated diamond electrodes for photocatalytic ammonia synthesis

Idris Boukahil, Phillip S. Johnson, F. J. Himpsel, Ruimin Qiao, Jason A. Bandy more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **35**, 04D102 (2017); <http://doi.org/10.1116/1.4980041>

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Characterization of PECVD a-C:H:Si:O:Cl films

Diego Rossi, Richard Landers, José R. R. Bortoleto, and Steven F. Durrant

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Effects of photogenerated carrier scattering on the decay process of coherent longitudinal optical phonons in an undoped GaAs/*n*-type GaAs epitaxial structure investigated by terahertz time-domain spectroscopy

Hideo Takeuchi, Takahiro Sumioka, and Masaaki Nakayama

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **35**, 04D104 (2017); <http://doi.org/10.1116/1.4983637>

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Functional fatigue of submicrometer NiTi shape memory alloy thin films

Huilong Hou, Yuan Tang, Reginald F. Hamilton, and Mark W. Horn

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Reactive ion beam sputtering of Ti: Influence of process parameters on angular and energy distribution of sputtered and backscattered particles

Thomas Lautenschläger, and Carsten Bundesmann

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Efficacy of atmospheric pressure dielectric barrier discharge for inactivating airborne pathogens

Jaione Romero-Mangado, Avishek Dey, Diana C. Diaz-Cartagena, Nadja E. Solis-Marcano, Marjorie López-Nieves more...

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Inductively coupled plasma reactive-ion etching of β -Ga₂O₃: Comprehensive investigation of plasma chemistry and temperature

Amit P. Shah, and Arnab Bhattacharya

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(2017); <http://doi.org/10.1116/1.4983078>

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Single-step inductively coupled plasma etching of sputtered Nb₂O₅/SiO₂ multilayer stacks using chromium etch mask

Muhammad Taimoor, Abdullah Alatawi, Sabrina Reuter, Hartmut Hillmer, and Thomas Kusserow

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **35**, 041302
(2017); <http://doi.org/10.1116/1.4983683>

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Transition between stable hydrophilization and fast etching/hydrophilization of poly(methyl)methacrylate polymer using a novel atmospheric pressure dielectric barrier discharge source

Panagiotis Dimitrakellis, Evangelos Gogolides, Angelos Zeniou, Kamil Awsiuk, Jakub Rysz more...

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Analysis of trace *n*-alkane in air by cryogenic-temperature programmed desorption

Taku T. Suzuki, and Isao Sakaguchi

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Epitaxial multilayers of β -FeSi₂nanodots/Si for Si-based nanostructured electronic materials

Shunya Sakane, Masayuki Isogawa, Kentaro Watanabe, Jun Kikkawa, Shotaro Takeuchi more...

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Influence of Si precursor type on the surface roughening of SiGe epitaxial layers deposited by ultrahigh vacuum chemical vapor deposition method

Youngmo Kim, Sungyeol Yoon, Daehong Ko, and Hyun-chul Sohn

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **35**, 041403 (2017); <http://doi.org/10.1116/1.4986490>

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Influence of surface roughness on secondary electron emission from graphite

Thomas S. Burton, Tyson C. Back, Steven B. Fairchild, and Gregory B. Thompson

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(2017); <http://doi.org/10.1116/1.4986629>

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Manipulation of single Si adatoms and observation of fast diffusion of Si dimers on a Pb-covered Si(111) surface

Rakesh Kumar, Chih-Hao Lee, and Ing-Shouh Hwang

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Thin Films

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Catalyst free growth of highly crystalline ZnO nanopillars on c-GaN/sapphire templates by chemical vapor deposition technique

Rajendra K. Saroj, Barun K. Barick, and Shubhabrata Dhar

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(2017); <http://doi.org/10.1116/1.4983209>

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Effects of the Ar and He dilution gas mixture ratio on the hardness of a-C:H films synthesized by atmospheric pressure plasma enhanced chemical vapor deposition

Eiichi Kishimoto, Shunto Maegawa, Akira Shirakura, and Tetsuya Suzuki

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(2017); <http://doi.org/10.1116/1.4983374>

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Growth mode of alumina atomic layer deposition on nanopowders

Kedar Manandhar, James A. Wollmershauser, and Boris N. Feigelson

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Chemical composition and properties of MoAl thin films deposited by sputtering from MoAl compound targets

Roland Lorenz, Michael O'Sullivan, Dietmar Sprenger, Bernhard Lang, and Christian Mitterer

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Transport and magnetic properties of amorphous SiC/Cu ultrathin multilayer films

Ning Sun, Yi Zhu, Yuting Fu, Shuai Wen, Long Feng more...

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Atomic layer deposition of tin oxide thin films from bis[bis(trimethylsilyl)amino]tin(II) with ozone and water

Jere Tupala, Marianna Kemell, Miika Mattinen, Kristoffer Meinander, Sanni Seppälä more...

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Structure and thermophysical properties of GaN films deposited by reactive sputtering using a metal Ga target

Yuji Isosaki, Yuichiro Yamashita, Takashi Yagi, Junjun Jia, Naoyuki Taketoshi more...

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Low temperature SiO_x thin film deposited by plasma enhanced atomic layer deposition for thin film encapsulation applications

Young-Soo Lee, Ju-Hwan Han, Jin-Seong Park, and Jozeph Park

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Growth of coherent B_GGaN films using BBr₃ gas as a boron source in plasma assisted molecular beam epitaxy

Richard C. Cramer, Bastien Bonafant, John English, Cyrus E. Dreyer, Chris G. Van de Walle more...

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Effect of ultrathin Fe dusting layer on electrical transport properties of few-layer MoS₂ field-effect transistors

Ying Wang, Long Qi, and Yihong Wu

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Nucleation and growth of CuCl thin films on commercially available SnO₂/glass substrates by the sublimation method

Anthony P. Nicholson, Davis R. Hemenway, Walajabad S. Sampath, and Kurt L. Barth

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **35**, 041511 (2017); <http://doi.org/10.1116/1.4986944>

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Enhanced atomic layer etching of native aluminum oxide for ultraviolet optical applications

John Hennessy, Christopher S. Moore, Kunjithapatham Balasubramanian, April D. Jewell, Kevin France more...

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Plasma-enhanced atomic layer deposition of vanadium phosphate as a lithium-ion battery electrode material

Thomas Dobbelaere, Felix Mattelaer, Philippe M. Vereecken, and Christophe Detavernier

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Room temperature thermally evaporated thin Au film on Si suitable for application of thiol self-assembled monolayers in micro/nano-electro-mechanical-systems sensors

Nasim Mahmoodi, Abduljabbar I. Rushdi, James Bowen, Aydin Sabouri, Carl J. Anthony more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **35**, 041514 (2017); <http://doi.org/10.1116/1.4990026>

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Characterization of transparent conductive ZnO and Ga-doped ZnO films on polyethylene naphthalate sheets aged for six years in ambient atmospheric

Housei Akazawa

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **35**, 041515 (2017); <http://doi.org/10.1116/1.4990538>

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Influence of Ag volume fraction on microstructure and optical constants of Ag-WO₃ thin films

Xishun Jiang, Qibin Lin, Yongchun Zhang, Yonghua Shi, Xinyi Li more...

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Investigations of medium-temperature heat treatments to achieve low outgassing rates in stainless steel ultrahigh vacuum chambers

Makfir Sefa, James A. Fedchak, and Julia Scherschligt

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **35**, 041601 (2017); <http://doi.org/10.1116/1.4983211>

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Vacuum properties and operation stability of the radio-frequency quadrupole accelerator in Japan Proton Accelerator Research Complex linac

Takatoshi Morishita, Yasuhiro Kondo, Hidetomo Oguri, and Kazuo Hasegawa

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **35**, 041602 (2017); <http://doi.org/10.1116/1.4983527>

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Comparison of permeation of atmospheric gases through Viton O-ring gaskets for different initial conditions

Makfir Sefa, and Janez Setina

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